

Finance, Insurance and Real Estate *Occupational Demand-Supply Analysis for the Central Midwest*



Principal Investigator:
David J. Peters

CAREER CONNECTIONS

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MISSOURI DEPARTMENT OF ECONOMIC DEVELOPMENT



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Finance, Insurance and Real Estate

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Overview

The United States economy is restructuring from an industrial economy to a post-industrial economy. This entails a shift in the core industries that drive the economy, away from manufacturing and transportation towards advanced services, communications and finance. This new core, composed of service and information producing firms, is what will drive the nation's growth in the coming decades. Therefore, it is imperative that policy-makers at all levels of government understand the strengths and weaknesses of their finance, insurance and real estate base. Given the nature of the global economy, policy-makers need to identify areas of economic comparative advantage that they can build upon; and areas of economic vulnerability that they need to strengthen.

Increasingly, economic development efforts are focusing on attracting quality jobs, rather than attracting the largest quantity of jobs. Given this preference, the skill and occupational mix of the workforce is a crucial consideration in determining an economic development strategy. A region's chance of successfully attracting a particular industry rests heavily with the occupational base in the community. Labor requirements differ across industries and are based upon the primary economic activity of the firm. In essence, successful economic development partly rests with matching the available occupational base in the community with an industry's occupational demand.

The purpose of this analysis is to provide indicators of the national competitiveness of a region's occupational base in the finance, insurance and real estate industries in the central Midwest. Occupational similarity can be used by economic developers and policy officials in two ways. First, ranking the similarity scores within a region provides a form of industry targeting that indicates which industries are best suited to the occupational base in the region. Second, industries with high dissimilarity are identified so that programs can be developed which strengthen the labor force in the region in order to make the area more attractive to selected industries.

It is important to note that low occupational similarity does not necessarily mean that the region has poor quality occupations or skill levels. Different types of finance, insurance and real estate firms require different occupations and skills, and will locate to areas that best suit their labor needs. For example, investment firms may not locate to areas dominated by low-skill occupations since they may have difficulty finding qualified workers. On the other hand, deposit banking firms may not locate to areas dominated by high-skill occupations since they too may have difficulty finding workers willing to work in lower-skill jobs at lower pay.

Data and Methods

One method to measure the disparity between the occupational demand of an industry and the occupational supply in a region is by using the Occupational Similarity Index (OSI). The index produces a similarity measure for a region that is normalized to the national average. Index scores are expressed in standard deviations above and below the national similarity score. The OSI can be interpreted in two ways. First, ranking the OSI values for each industry within a region provides a form of industry targeting that indicates which industries are best suited to the occupational base in the region. Second, OSI values can be used in developing programs that strengthen the labor force in the region in order to make the area more attractive to selected industries.

The OSI is calculated by taking the difference between the industry occupational demand minus the regional occupational supply across 22 occupational groupings, which is then normalized to the national average. National industry occupational demand was derived from Occupational Employment Statistics data from the U.S. Bureau of Labor Statistics. Regional occupational supply was derived from STF-3 Census 2000 data from the U.S. Census Bureau. Data was gathered at the county-level for five central Midwestern states that included Arkansas, Illinois, Iowa, Kansas and Missouri.

OSI values less than 0.0 indicate a greater occupational similarity or match between national industry demand and regional supply. This indicates that the region has the labor needed to support that industry, which may indicate a national competitive advantage in terms of labor compared to the rest of the United States. Conversely, OSI values greater than 0.0 indicate a lower occupational similarity or dissimilarity between national industry demand and regional supply. This indicates that the region does not have the required labor needed to support that industry.

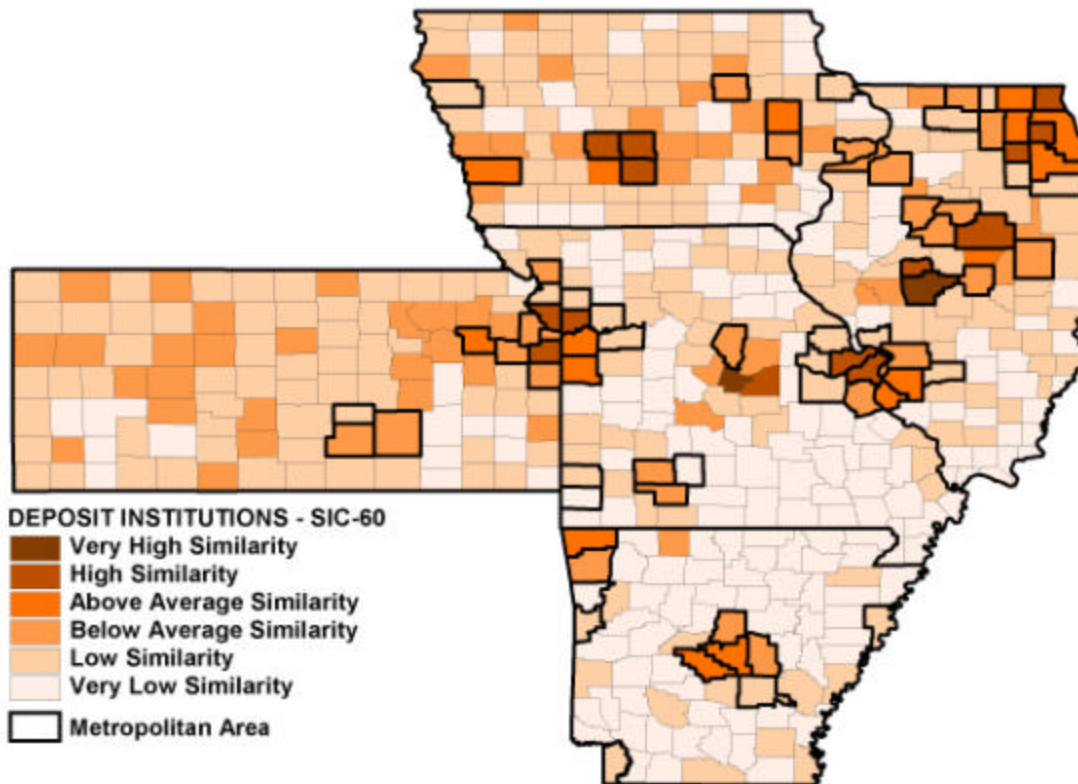
$$OSI_{ir} = \left(\frac{OS_{ir} - \mu_n}{\sigma_n} \right)$$

$$OS_{ir} = \sum_{j=1}^{22} \left| \left(\left(\frac{E_{jr}}{E_r} \right) - \left(\frac{E_{ijn}}{E_{in}} \right) \right) \right|$$

Where:

- μ = Mean of OS Scores
- s = Standard Deviation of OS Scores
- i = Industry
- j = Occupation
- r = Region
- n = Nation
- E = Employment

Deposit Institutions



On average across the United States, the top five occupations demanded in this industry include:

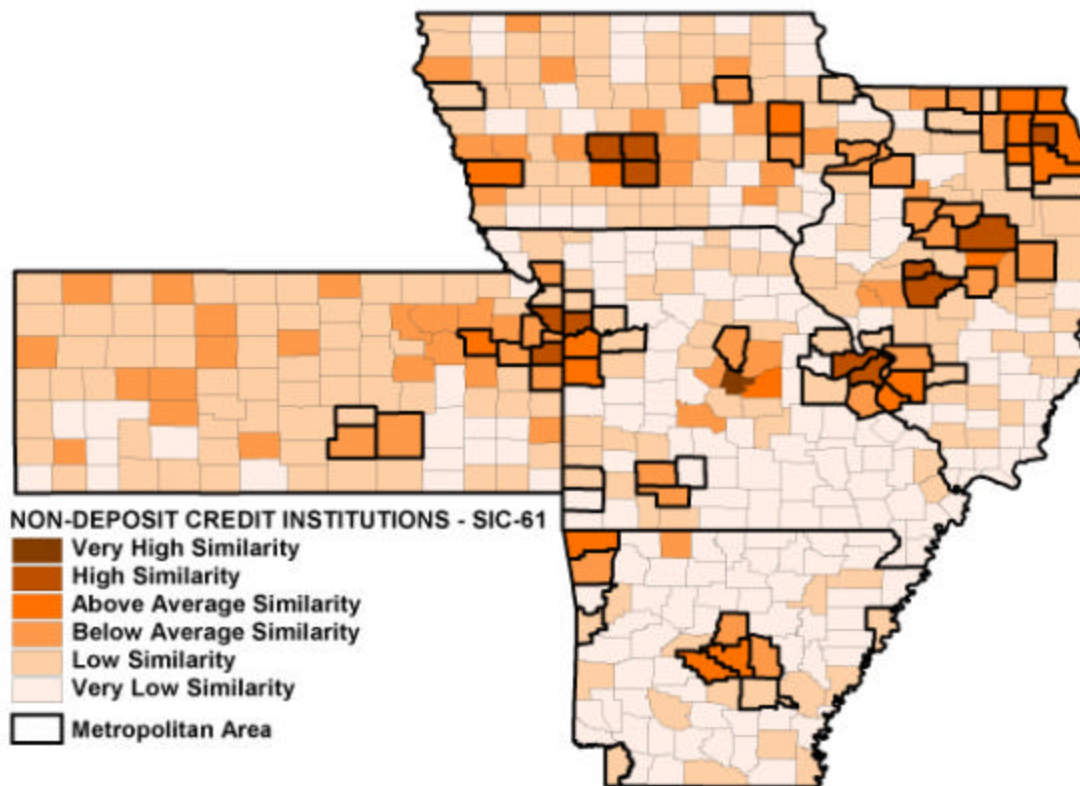
Office & Administrative Support Occupations	65.2%
Business & Financial Occupations	14.1%
Management Occupations	11.1%
Sales Occupations	4.1%
Computer & Mathematics Occupations	3.7%

In Missouri six counties had high or very high similarity between national occupational industry demand and county occupational supply, where five counties had high similarity and one county had very high similarity (Cole). The top similarity counties were:

COLE
PLATTE
ST. LOUIS

CLAY
OSAGE
ST. CHARLES

Non-Deposit Credit Institutions



On average across the United States, the top five occupations demanded in this industry include:

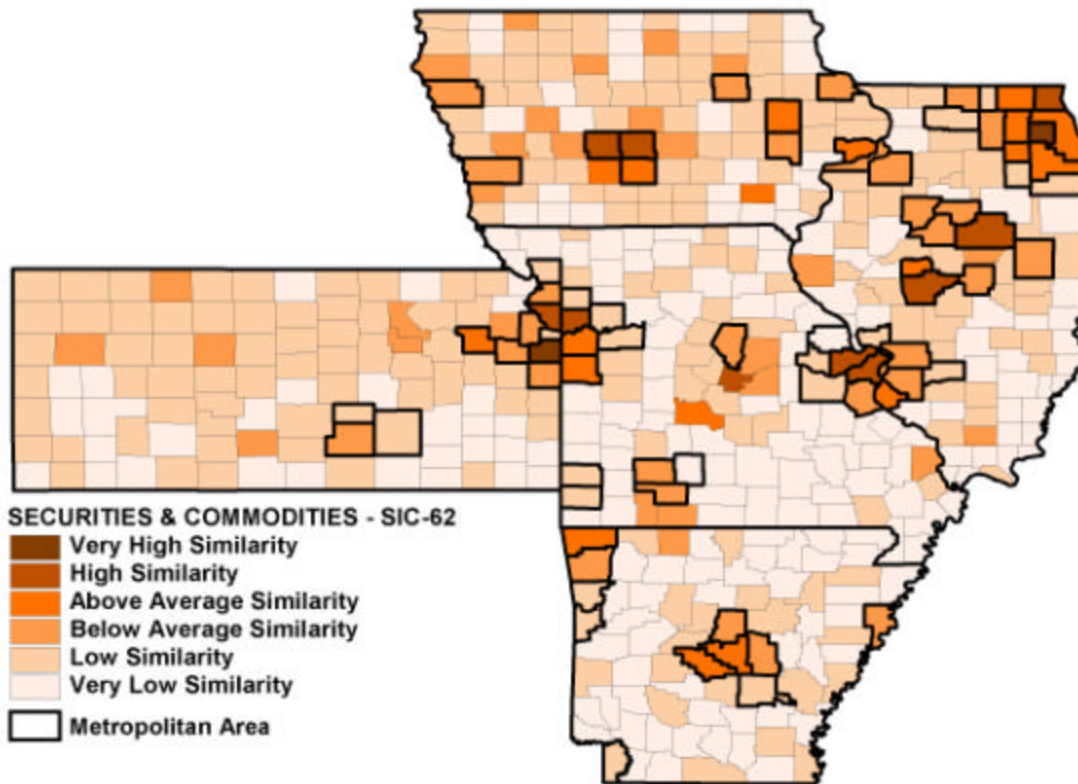
Office & Administrative Support Occupations	51.5%
Business & Financial Occupations	25.5%
Management Occupations	9.8%
Sales Occupations	8.1%
Computer & Mathematics Occupations	3.5%

In Missouri five counties had high or very high similarity between national occupational industry demand and county occupational supply, where four counties had high similarity and one county had very high similarity (Cole). The top similarity counties were:

COLE
PLATTE
CLAY

ST. LOUIS
ST. CHARLES

Securities & Commodities



On average across the United States, the top five occupations demanded in this industry include:

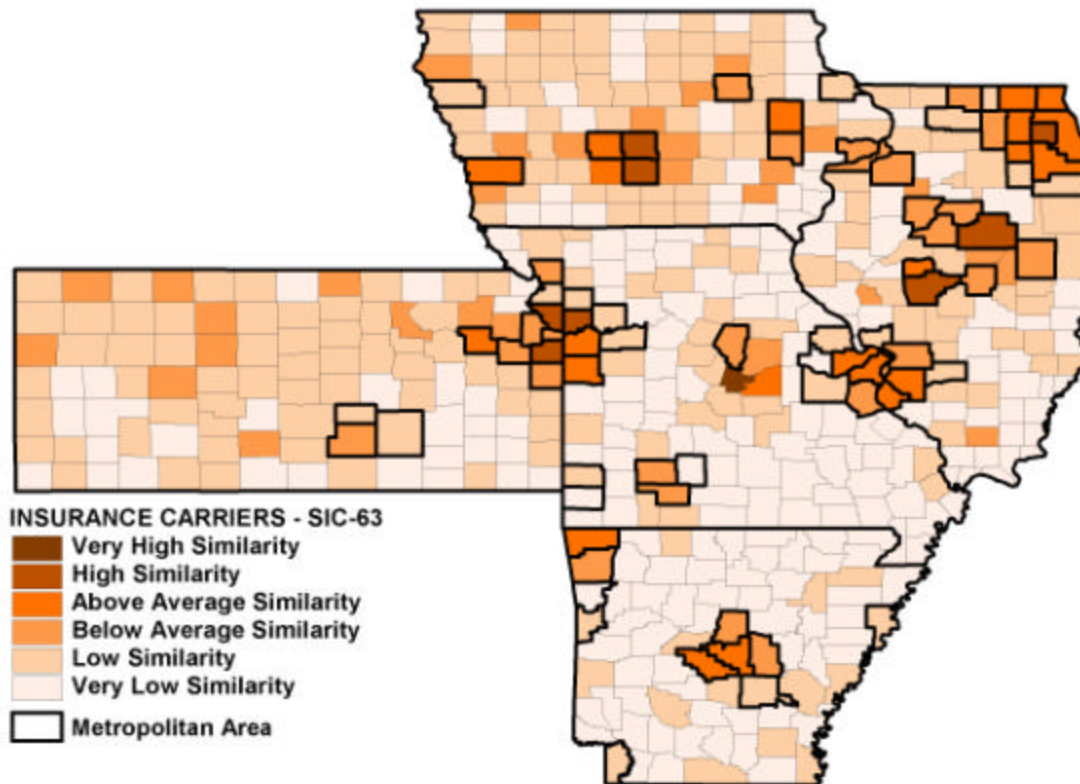
Office & Administrative Support Occupations	35.1%
Sales Occupations	26.6%
Business & Financial Occupations	17.8%
Management Occupations	12.1%
Computer & Mathematics Occupations	5.8%

In Missouri five counties had high or very high similarity between national occupational industry demand and county occupational supply, where all five counties had high similarity. The top similarity counties were:

PLATTE
ST. LOUIS
COLE

ST. CHARLES
CLAY

Insurance Carriers



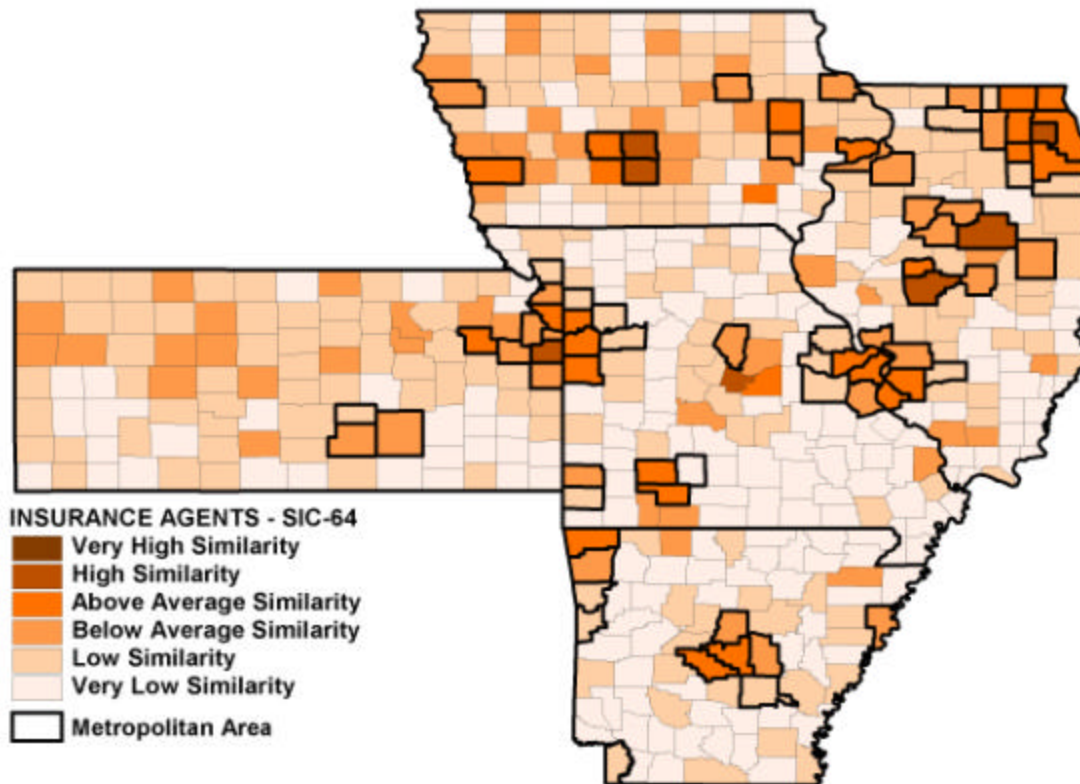
On average across the United States, the top five occupations demanded in this industry include:

Office & Administrative Support Occupations	44.2%
Business & Financial Occupations	23.1%
Sales Occupations	9.2%
Management Occupations	8.4%
Computer & Mathematics Occupations	8.1%

In Missouri three counties had high or very high similarity between national occupational industry demand and county occupational supply, where two counties had high similarity and one county had very high similarity (Cole). The top similarity counties were:

COLE CLAY PLATTE

Insurance Agents



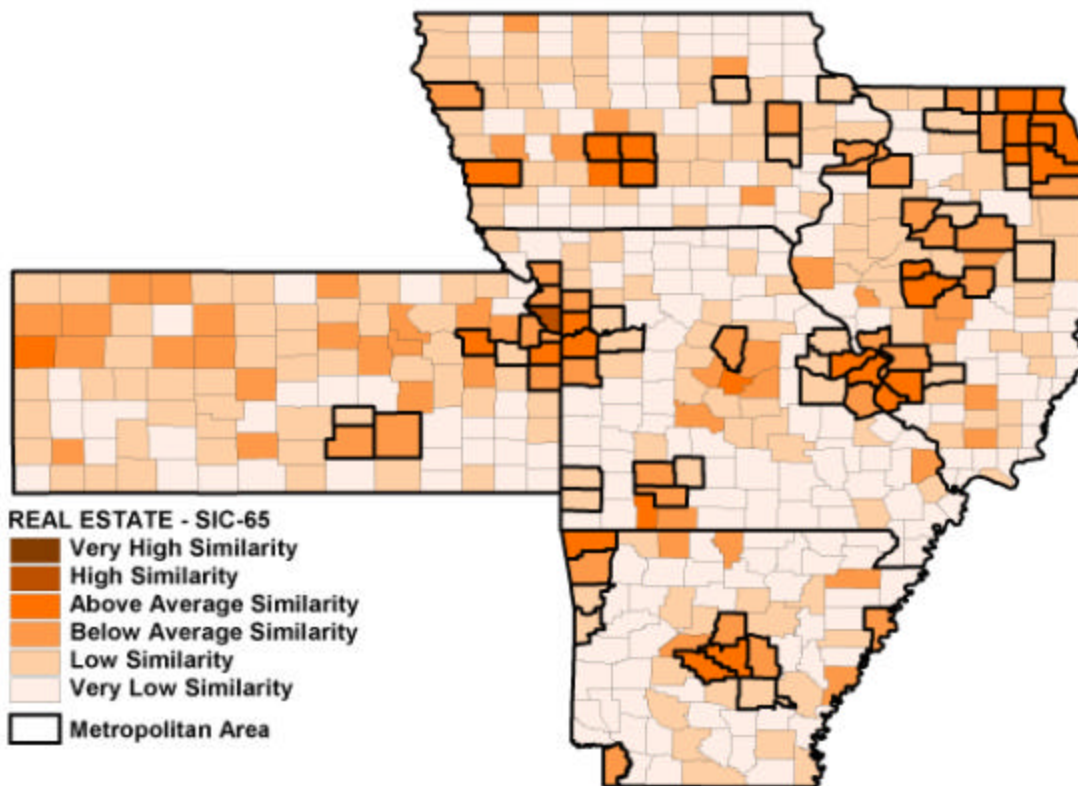
On average across the United States, the top five occupations demanded in this industry include:

Office & Administrative Support Occupations	50.8%
Sales Occupations	23.6%
Business & Financial Occupations	13.2%
Management Occupations	7.6%
Computer & Mathematics Occupations	2.5%

In Missouri only one county had high or very high similarity between national occupational industry demand and county occupational supply, where Cole County had high similarity. The top similarity counties were:

COLE

Real Estate



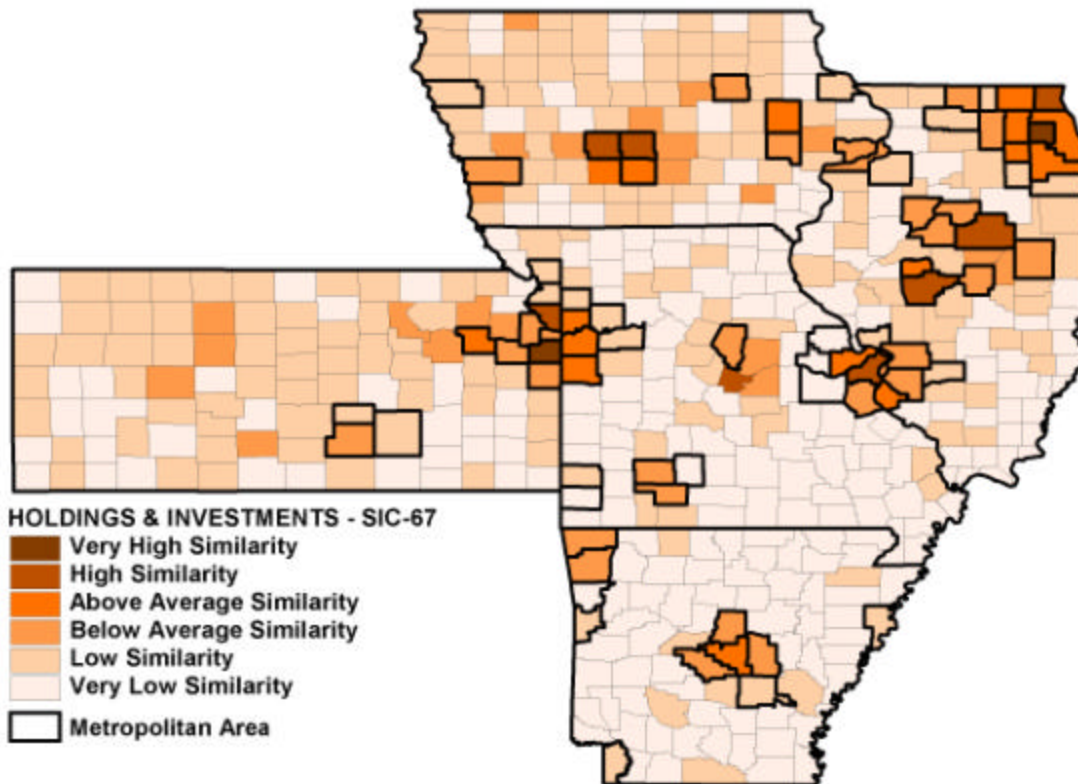
On average across the United States, the top five occupations demanded in this industry include:

Office & Administrative Support Occupations	24.8%
Building & Grounds Maintenance Occupations	15.5%
Installation, Maintenance & Repair Occupations	14.0%
Management Occupations	14.0%
Sales Occupations	12.2%

In Missouri only one county had high or very high similarity between national occupational industry demand and county occupational supply, where Platte County had high similarity. The top similarity counties were:

PLATTE

Holdings & Investments



On average across the United States, the top five occupations demanded in this industry include:

Office & Administrative Support Occupations	33.8%
Management Occupations	18.8%
Business & Financial Occupations	17.7%
Sales Occupations	8.1%
Computer & Mathematics Occupations	6.4%

In Missouri three counties had high or very high similarity between national occupational industry demand and county occupational supply, where all three counties had high similarity. The top similarity counties were:

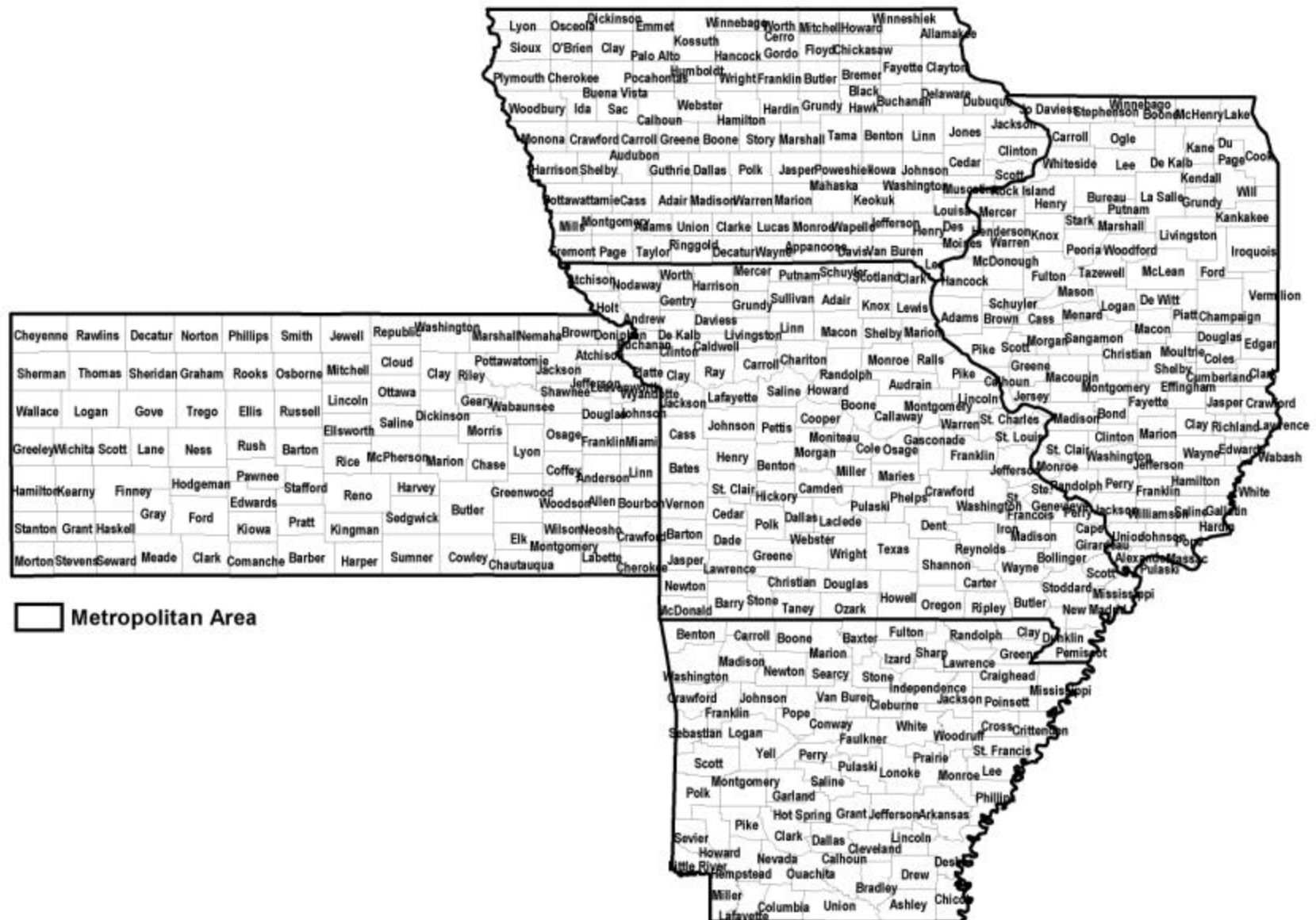
COLE PLATTE
ST. LOUIS

Summary

This analysis has provided indicators of the national competitiveness of a region's occupational base in the finance, insurance and real estate industries in the central Midwest. Occupational similarity can be used by economic developers and policy officials in two ways. First, ranking the similarity scores within a region provides a form of industry targeting that indicates which industries are best suited to the occupational base in the region. Second, industries with high dissimilarity are identified so that programs can be developed which strengthen the labor force in the region in order to make the area more attractive to selected industries.

In general, the occupational base in most Missouri communities is highly dissimilar to most finance, insurance and real estate industries. However, Missouri has a small labor competitive advantage in deposit institutions, non-deposit credit institutions and securities and commodities firms. This indicates that many Missouri communities do not have the needed labor required to support these industries. Therefore, communities can use this information to craft education and training programs to develop specific segments of the labor force.

Appendix 1 - County Names



Appendix 2 - Occupational Similarity Index Data Tables

COUNTY	SIC-60	SIC-61	SIC-62	SIC-63	SIC-64	SIC-65	SIC-67
ADAIR	1.42	1.41	1.73	1.60	1.72	2.17	1.36
ANDREW	0.61	0.64	1.22	0.97	1.15	0.93	1.04
ATCHISON	2.10	2.14	2.08	2.14	2.01	1.97	2.35
AUDRAIN	1.41	1.39	1.50	1.40	1.41	1.68	1.67
BARRY	2.01	2.03	2.29	2.24	2.23	2.50	2.25
BARTON	1.67	1.72	2.10	2.01	2.01	2.06	2.04
BATES	2.24	2.29	2.39	2.33	2.30	2.67	2.64
BENTON	2.43	2.49	2.28	2.50	2.19	2.09	2.75
BOLLINGER	3.06	3.03	2.89	2.97	2.98	2.86	3.11
BOONE	0.26	0.26	0.27	0.21	0.16	0.96	0.17
BUCHANAN	1.02	1.01	0.80	1.02	0.67	0.43	1.14
BUTLER	2.02	2.06	1.90	2.06	1.82	1.94	2.28
CALDWELL	2.50	2.55	2.34	2.56	2.26	1.68	2.74
CALLAWAY	0.38	0.37	0.84	0.56	0.71	0.67	0.60
CAMDEN	0.85	0.85	-0.11	1.21	0.07	0.00	1.12
CAPE GIRARDEAU	1.38	1.37	0.71	1.38	0.57	1.00	1.45
CARROLL	1.90	2.05	2.37	2.22	2.34	2.60	2.12
CARTER	2.49	2.62	2.78	2.85	2.85	2.82	2.50
CASS	-0.50	-0.47	-0.09	-0.33	-0.31	0.26	-0.01
CEDAR	1.70	1.77	2.15	2.07	2.07	2.14	2.02
CHARITON	1.67	2.01	2.35	2.30	2.31	2.53	2.23
CHRISTIAN	0.50	0.49	0.06	0.54	-0.08	0.08	0.71
CLARK	3.26	3.31	3.31	3.41	3.26	3.34	3.53
CLAY	-1.24	-1.22	-1.08	-1.07	-0.93	-0.97	-0.83
CLINTON	1.34	1.38	1.47	1.41	1.35	0.93	1.58
COLE	-2.22	-2.20	-1.25	-2.10	-1.32	-0.90	-1.87
COOPER	1.55	1.54	1.64	1.56	1.58	1.25	1.86
CRAWFORD	2.99	2.97	2.94	2.98	2.98	2.78	3.11
DADE	2.46	2.50	2.67	2.68	2.65	2.74	2.80
DALLAS	2.87	2.85	2.37	2.85	2.34	2.27	2.86
DAVIESS	2.15	2.14	2.39	2.33	2.33	2.24	2.52
DE KALB	1.18	1.37	1.77	1.66	1.70	1.55	1.68
DENT	2.85	2.83	2.62	2.79	2.66	2.00	2.88
DOUGLAS	2.41	2.41	2.57	2.56	2.56	3.12	2.63
DUNKLIN	2.74	2.73	2.56	2.71	2.55	2.44	2.90
FRANKLIN	1.83	1.84	1.97	1.86	1.90	1.99	2.05
GASCONADE	2.55	2.61	2.81	2.84	2.79	3.42	2.77
GENTRY	2.13	2.19	2.21	2.21	2.11	2.00	2.48

COUNTY	SIC-60	SIC-61	SIC-62	SIC-63	SIC-64	SIC-65	SIC-67
GREENE	0.69	0.68	0.02	0.71	-0.27	0.40	0.76
GRUNDY	2.60	2.64	2.74	2.78	2.77	2.32	2.90
HARRISON	2.13	2.19	2.24	2.26	2.10	1.72	2.63
HENRY	2.08	2.07	1.90	2.09	1.82	2.09	2.29
HICKORY	2.80	2.79	2.29	2.74	2.26	2.21	2.91
HOLT	1.96	2.17	2.42	2.42	2.43	2.39	2.14
HOWARD	1.26	1.42	1.79	1.68	1.78	1.46	1.55
HOWELL	2.42	2.46	2.18	2.47	2.08	2.11	2.57
IRON	2.76	2.77	2.86	2.94	2.93	2.42	2.76
JACKSON	-0.85	-0.84	-0.63	-0.88	-0.67	-0.44	-0.68
JASPER	1.48	1.47	1.10	1.50	0.96	1.04	1.66
JEFFERSON	0.63	0.63	0.55	0.69	0.35	0.11	0.96
JOHNSON	1.65	1.64	1.77	1.69	1.67	1.61	1.83
KNOX	1.82	1.85	1.95	1.88	1.91	1.82	2.06
LACLEDE	2.68	2.69	2.23	2.69	2.15	2.46	2.77
LAFAYETTE	1.21	1.23	1.36	1.26	1.22	1.09	1.54
LAWRENCE	1.94	1.96	2.09	2.04	2.07	2.46	2.10
LEWIS	1.78	1.94	2.28	2.22	2.22	2.56	2.15
LINCOLN	1.80	1.84	2.03	1.93	1.92	1.79	2.09
LINN	1.64	1.68	1.90	1.77	1.79	2.31	1.68
LIVINGSTON	1.77	1.76	1.50	1.76	1.41	1.37	1.97
MC DONALD	2.28	2.33	2.46	2.43	2.39	2.62	2.53
MACON	2.44	2.47	2.43	2.45	2.42	2.33	2.60
MADISON	2.60	2.65	2.77	2.78	2.67	2.73	2.98
MARIES	1.62	1.70	2.04	1.95	2.04	1.58	1.92
MARION	2.05	2.06	1.91	2.06	1.87	1.80	2.24
MERCER	1.38	2.27	2.53	2.54	2.52	2.57	2.62
MILLER	1.83	1.85	1.77	1.88	1.65	1.39	2.05
MISSISSIPPI	2.73	2.73	2.70	2.71	2.71	2.83	2.96
MONITEAU	0.60	0.75	1.29	1.06	1.15	0.91	1.14
MONROE	2.46	2.88	3.05	3.13	3.08	3.09	3.03
MONTGOMERY	2.80	2.83	2.87	2.90	2.84	2.70	3.03
MORGAN	2.21	2.21	1.82	2.23	1.71	1.36	2.41
NEW MADRID	2.92	2.92	2.83	2.88	2.88	2.76	3.10
NEWTON	2.19	2.16	1.79	2.16	1.74	2.00	2.32
NODAWAY	1.60	1.65	2.06	1.96	1.96	2.05	1.69
OREGON	3.15	3.15	3.09	3.19	3.12	3.62	3.26
OSAGE	-1.23	-0.57	0.21	-0.19	-0.07	0.41	0.01

COUNTY	SIC-60	SIC-61	SIC-62	SIC-63	SIC-64	SIC-65	SIC-67
OZARK	2.44	2.44	2.59	2.58	2.57	2.49	2.65
PEMISCOT	2.85	2.83	2.72	2.82	2.73	2.68	3.09
PERRY	1.94	2.01	2.32	2.29	2.28	2.28	2.24
PETTIS	2.23	2.21	2.16	2.20	2.13	2.07	2.29
PHELPS	1.68	1.66	1.56	1.61	1.53	1.64	1.56
PIKE	1.84	2.38	2.68	2.67	2.61	2.24	2.69
PLATTE	-1.61	-1.22	-1.72	-1.10	-0.80	-1.34	-1.55
POLK	1.50	1.49	1.64	1.54	1.53	1.53	1.63
PULASKI	2.20	2.18	1.97	2.12	1.94	1.40	2.21
PUTNAM	2.47	3.06	3.27	3.37	3.22	4.06	3.31
RALLS	2.36	2.34	2.59	2.50	2.62	2.15	2.30
RANDOLPH	1.59	1.60	1.77	1.63	1.69	1.25	1.88
RAY	1.16	1.36	1.79	1.60	1.73	1.41	1.65
REYNOLDS	3.25	4.03	3.96	4.20	4.15	4.26	4.03
RIPLEY	3.45	3.48	3.34	3.51	3.47	4.03	3.39
ST. CHARLES	-1.04	-1.01	-1.17	-0.57	-0.85	-0.43	-0.50
ST. CLAIR	2.17	2.21	2.22	2.24	2.12	2.68	2.40
STE. GENEVIE	2.29	2.31	2.57	2.56	2.54	2.61	2.38
ST. FRANCOIS	2.27	2.27	2.16	2.29	2.10	1.76	2.50
ST. LOUIS	-1.44	-1.13	-1.53	-0.90	-0.96	-0.39	-1.34
SALINE	2.52	2.49	2.55	2.58	2.64	2.84	2.62
SCHUYLER	1.80	1.85	1.97	1.90	1.84	2.44	2.30
SCOTLAND	2.26	2.45	2.68	2.69	2.73	2.86	2.67
SCOTT	1.59	1.59	1.37	1.65	1.20	1.29	1.91
SHANNON	3.97	3.99	3.84	4.09	4.03	4.83	4.03
SHELBY	2.16	2.41	2.64	2.65	2.65	3.11	2.59
STODDARD	3.03	3.05	3.03	3.09	3.01	3.17	3.24
STONE	1.35	1.37	0.63	1.43	0.48	-0.06	1.44
SULLIVAN	2.44	3.02	3.21	3.31	3.20	3.48	3.35
TANEY	1.43	1.41	0.08	1.71	0.23	0.34	1.49
TEXAS	2.24	2.27	2.33	2.32	2.33	2.34	2.36
VERNON	1.85	1.85	2.02	1.92	1.97	2.38	2.11
WARREN	1.97	2.01	1.75	2.01	1.66	1.47	2.18
WASHINGTON	3.06	3.17	3.31	3.41	3.35	3.09	3.33
WAYNE	2.95	2.93	3.02	3.09	3.07	3.23	3.09
WEBSTER	2.06	2.10	2.18	2.13	2.08	1.87	2.34
WORTH	1.52	1.50	1.90	1.69	1.81	2.30	1.94
WRIGHT	2.77	2.79	2.81	2.87	2.86	2.96	2.97
ST. LOUIS CITY	0.46	0.46	0.76	0.38	0.62	0.55	0.37

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